Amendments to the Claims

Claim 1 **(Currently Amended)** An optical head comprising:

a light emitting element having a plurality of light sources integrally formed, said light sources being operable to emit beams having different wave lengths from each other;

an optical system operable to converge a beam emitted by any one of said light sources of said light emitting element onto an optical information storage medium;

an optical separator operable to separate a reflected beam coming from the optical information storage medium from the beam coming from said one of said light sources; and

a light receiving element operable to detect light quantities of the reflected beam separated by said optical separator,

wherein an aligning direction of said light sources inclines by about 45 degrees in a rotational direction around an axis of the beam coming from said one of said light sources based on a reflection axis of said optical separator.

Claim 2 **(Previously Presented)** The optical head according to claim 1, wherein said optical separator is operable to separate the reflected beam coming from the optical information storage medium from the beam coming from said one of said light sources by reflection and transmission.

Claim 3 **(Canceled)**

Claim 4 **(Currently Amended)** The optical head according to claim 1, ~~3~~, wherein said light receiving element is operable to receive a zero-order diffracted light, which is located at a central position, and said light receiving element comprises a number of regions at least equal to four times of a number of said light sources, said regions being grouped as region sets each of which includes four of said regions, and each of said region sets being operable to receive the reflected beam which has been emitted by said one of said light sources and then reflected by the optical information storage medium.

Claim 5 **(Previously Presented)** The optical head according to claim 4, wherein said optical separator comprises a parallel plate.

Claim 6 **(Previously Presented)** The optical head according to claim 1, further comprising an optical element disposed between said light sources and said optical system, said optical element having different diffraction gratings disposed on front and back portions thereof, wherein depths, pitches, and angles for axes of beams of said different diffraction gratings are different from each other, respectively.

Claim 7 **(Currently Amended)** An apparatus for storing and reproducing optical information, said apparatus comprising:

a light emitting element having a plurality of light sources integrally formed, said light sources being operable to emit beams having different wave lengths from each other;

an optical system operable to converge a beam emitted by any one of said light sources of said light emitting element onto an optical information storage medium;

an optical separator operable to separate a reflected beam coming from the optical information storage medium from the beam coming from said one of said light sources;

a light receiving element operable to detect light quantities of the reflected beam separated by said optical separator; and

an electric circuit operable to transform optical signals of said light receiving element to electric signals so as to output signals stored in the optical information storage medium as the electric signals,

wherein an aligning direction of said light sources inclines by about 45 degrees in a rotational direction around an axis of the beam coming from said one of said light sources based on a reflection axis of said optical separator.

Claim 8 **(Currently Amended)** A method of storing and reproducing optical information for an apparatus for storing and reproducing the optical information with an optical head, the optical head including a light emitting element having a plurality of light sources integrally formed, the light sources being operable to emit beams having different wave lengths from each other, an optical system operable to converge a beam emitted by any one of the light sources of the light emitting element onto an optical information storage medium, an optical separator operable to separate a reflected beam coming from the optical information storage medium from the beam coming from the one of the light sources, and a light receiving element operable to detect light quantities of the reflected beam separated by the optical separator, said method comprising:

identifying a kind of the optical information storage medium;

making the light emitting element emit a beam having a wave length corresponding to the identified kind of the optical information storage medium and then converging the beam onto the optical information storage medium; and

detecting the reflected beam coming from the optical information storage medium and then outputting signals stored in the optical information storage medium as electric signals,

wherein an aligning direction of the light sources inclines by about 45 degrees in a rotational direction around an axis of the beam coming from the one of the light sources based on a reflection axis of the optical separator.